FIG. 1

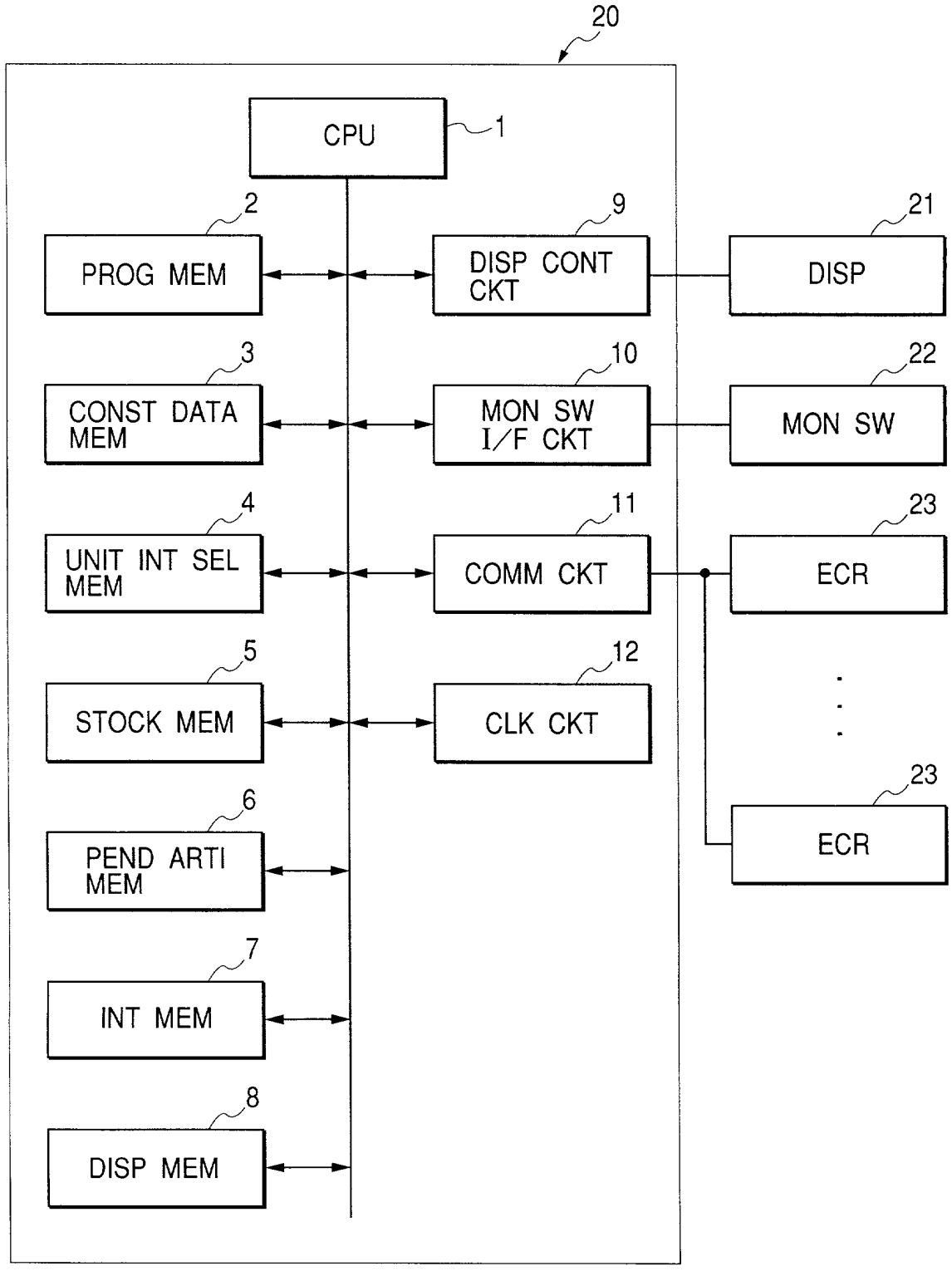
20
CPU
1
2
PROG MEM
9
DISP CONT CKT
21
DISP
3
CONST DATA MEM
10
MON SW I/F CKT
22
MON SW
4
UNIT INT SEL MEM
11
COMM CKT
23
ECR
5
STOCK MEM
12
CLK CKT
23
ECR
6
PEND ARTI MEM
7
INT MEM
8
DISP MEM

FIG. 2A

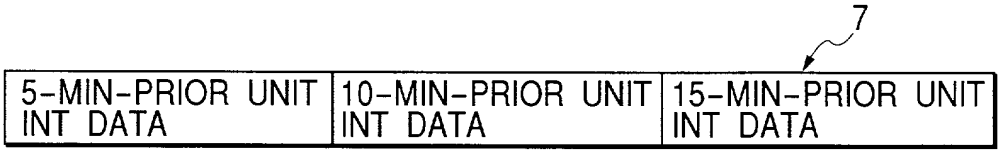

FIG. 2B

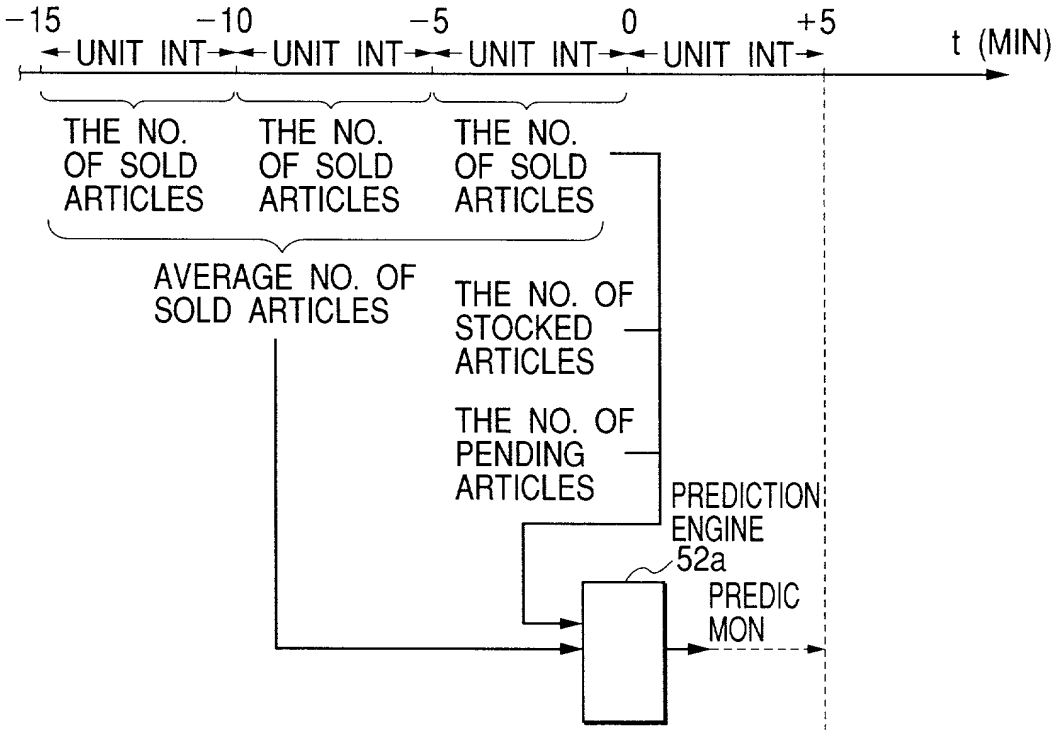

FIG. 3

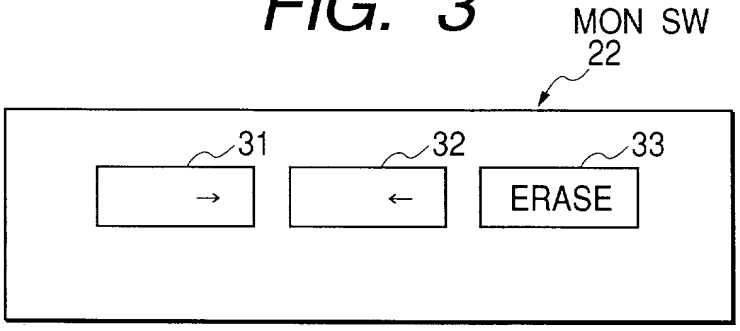

FIG. 4

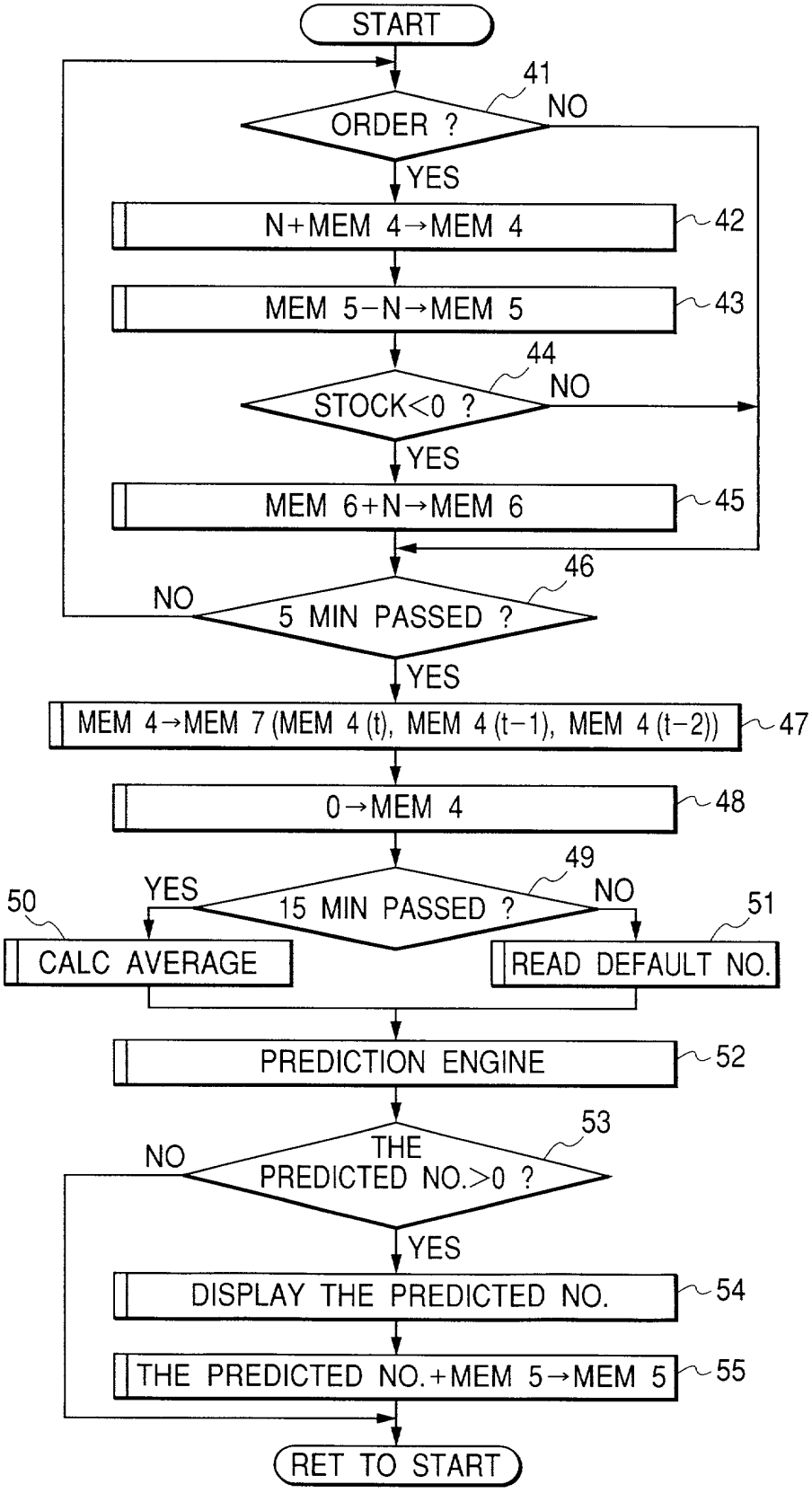
START
41
ORDER ?
NO
YES
N+MEM 4→MEM 4
42
MEM 5−N→MEM 5
43
44
STOCK<0 ?
NO
YES
MEM 6+N→MEM 6
45
46
NO
5 MIN PASSED ?
YES
MEM 4→MEM 7 (MEM 4 (t), MEM 4 (t−1), MEM 4 (t−2))
47
0→MEM 4
48
49
YES
15 MIN PASSED ?
NO
50
51
CALC AVERAGE
READ DEFAULT NO.
PREDICTION ENGINE
52
53
NO
THE PREDICTED NO.>0 ?
YES
DISPLAY THE PREDICTED NO.
54
THE PREDICTED NO.+MEM 5→MEM 5
55
RET TO START

FIG. 5

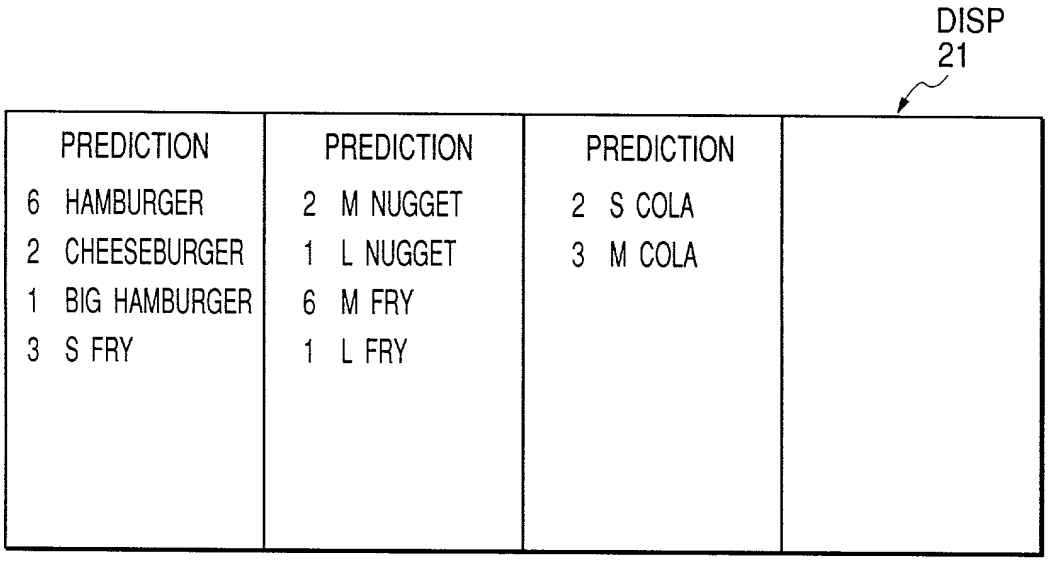
DISP
21
PREDICTION
6 HAMBURGER
2 CHEESEBURGER
1 BIG HAMBURGER
3 S FRY
PREDICTION
2 M NUGGET
1 L NUGGET
6 M FRY
1 L FRY
PREDICTION
2 S COLA
3 M COLA

FIG. 6

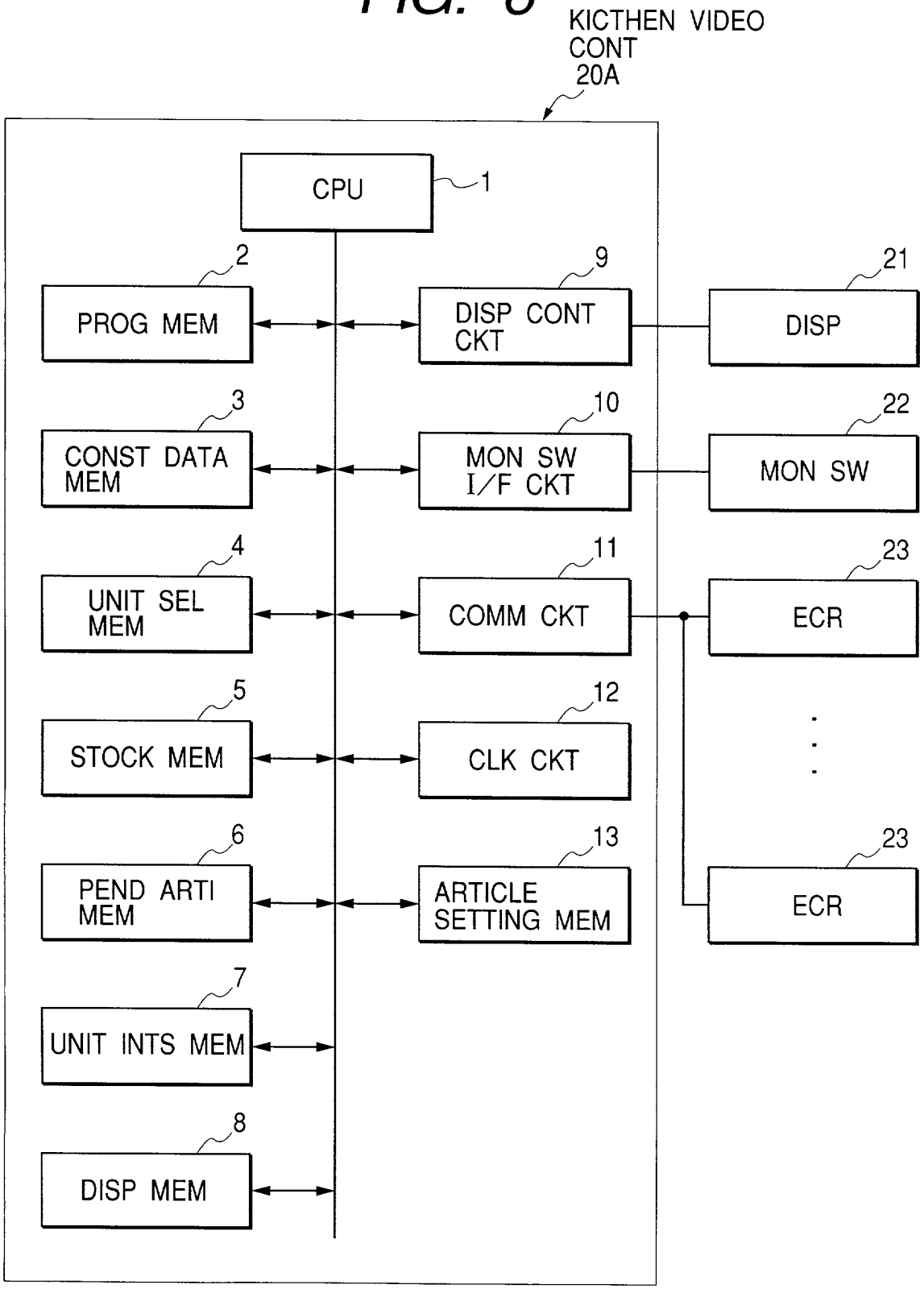
KICTHEN VIDEO CONT
20A
CPU
1
2
PROG MEM
3
CONST DATA MEM
4
UNIT SEL MEM
5
STOCK MEM
6
PEND ARTI MEM
7
UNIT INTS MEM
8
DISP MEM
9
DISP CONT CKT
10
MON SW I/F CKT
11
COMM CKT
12
CLK CKT
13
ARTICLE SETTING MEM
21
DISP
22
MON SW
23
ECR
23
ECR

FIG. 7

ARTICLE SETTING MEM

71 13 72

ARTICLE NAME	PREDICTION CONT FLG
HAMBURGER	1
BIGBURGER	1
CHEESEBURGER	1
FRY	1
S POTATO	1
M POTATO	1
L POTATO	1
S NUGGET	1
M NUGGET	1
L NUGGET	1
S COLA	0
M COLA	0
L COLA	0

FIG. 8

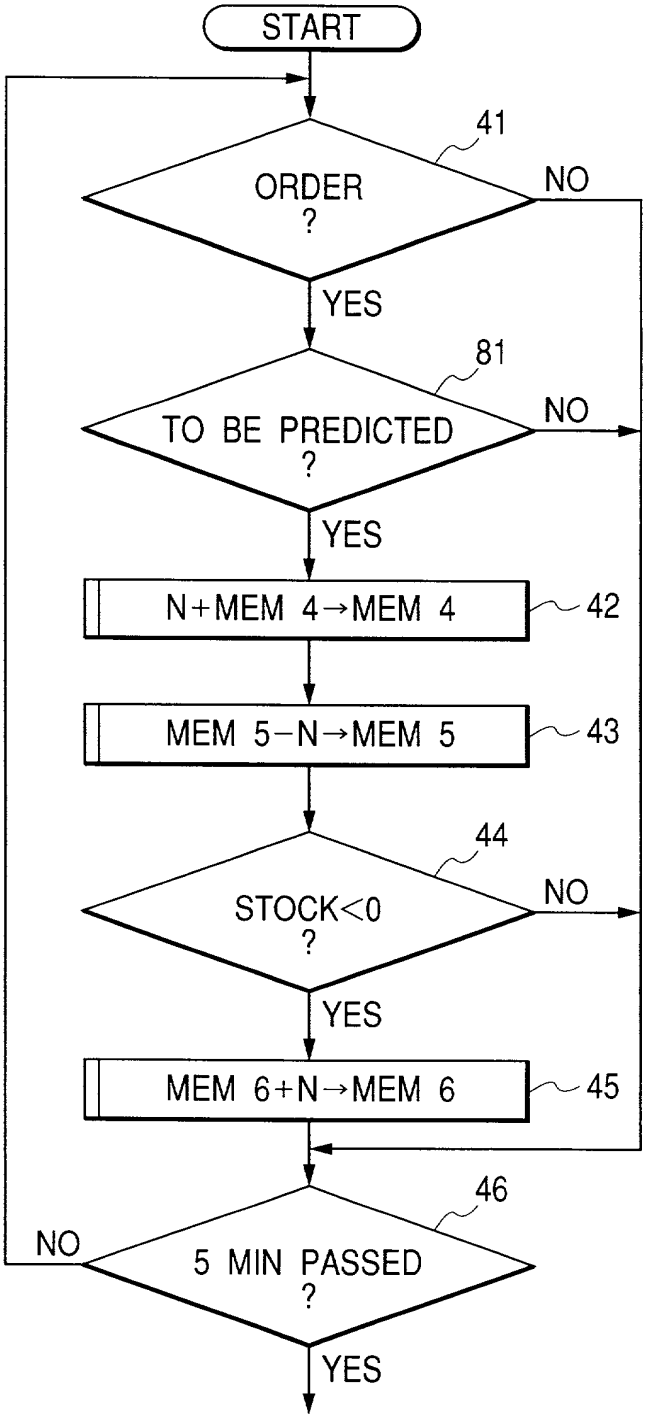
START
41
ORDER ?
NO
YES
81
TO BE PREDICTED ?
NO
YES
N+MEM 4→MEM 4
42
MEM 5−N→MEM 5
43
44
STOCK<0 ?
NO
YES
MEM 6+N→MEM 6
45
46
NO
5 MIN PASSED ?
YES

FIG. 9

ARTICLE SETTING MEMORY

91 13 92

ARTICLE NAME	AVERAGE
HAMBURGER	10
BIGBURGER	1
CHEESEBURGER	5
FRY	3
S POTATO	2
M POTATO	15
L POTATO	5
S NUGGET	1
M NUGGET	4
L NUGGET	2

FIG. 10

ARTICLE SETTING MEMORY

101 13 102 103

ARTICLE NAME	AVERAGE	
	WEEKDAYS	HOLIDAY
HAMBURGER	10	15
BIGBURGER	1	3
CHEESEBURGER	5	9
FRY	3	6
S POTATO	2	3
M POTATO	15	25
L POTATO	5	8
S NUGGET	1	4
M NUGGET	4	6
L NUGGET	2	3

FIG. 11

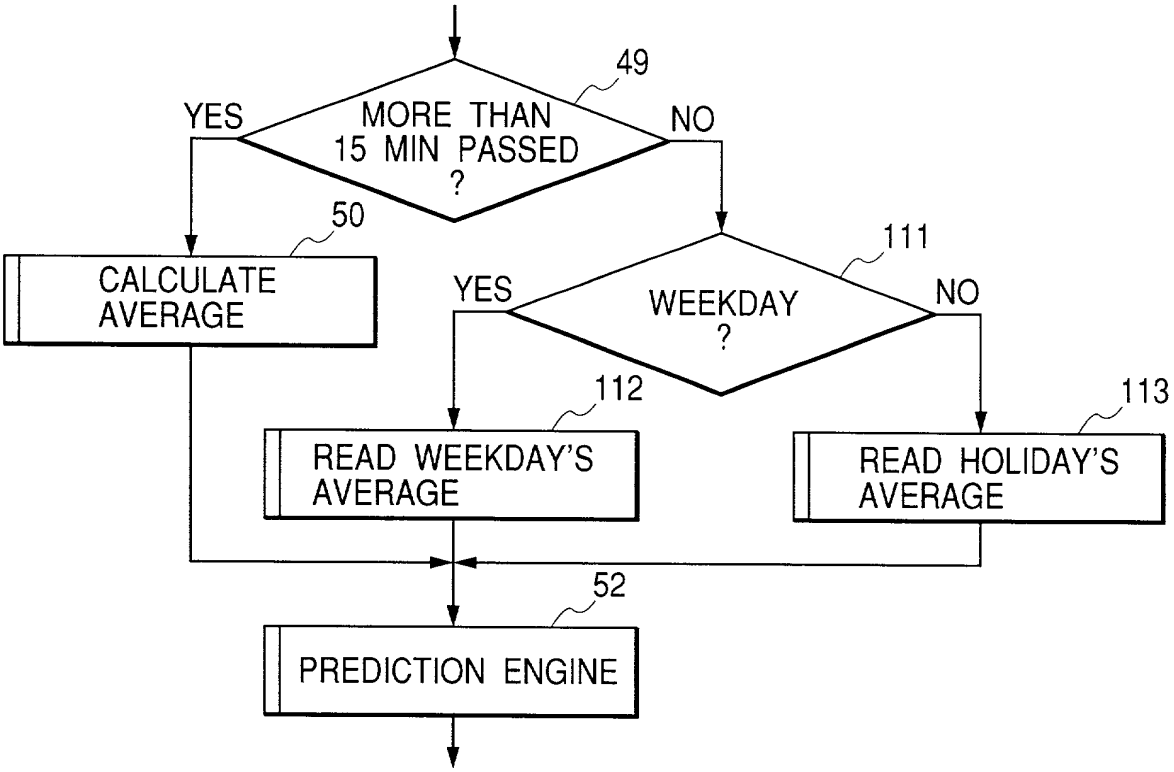

FIG. 12

ARTICLE SETTING MEMORY 13

121 ARTICLE NAME	122 MAX
HAMBURGER	60
BIGBURGER	30
CHEESEBURGER	60
FRY	40
S POTATO	80
M POTATO	80
L POTATO	80
S NUGGET	40
M NUGGET	30
L NUGGET	25

FIG. 13

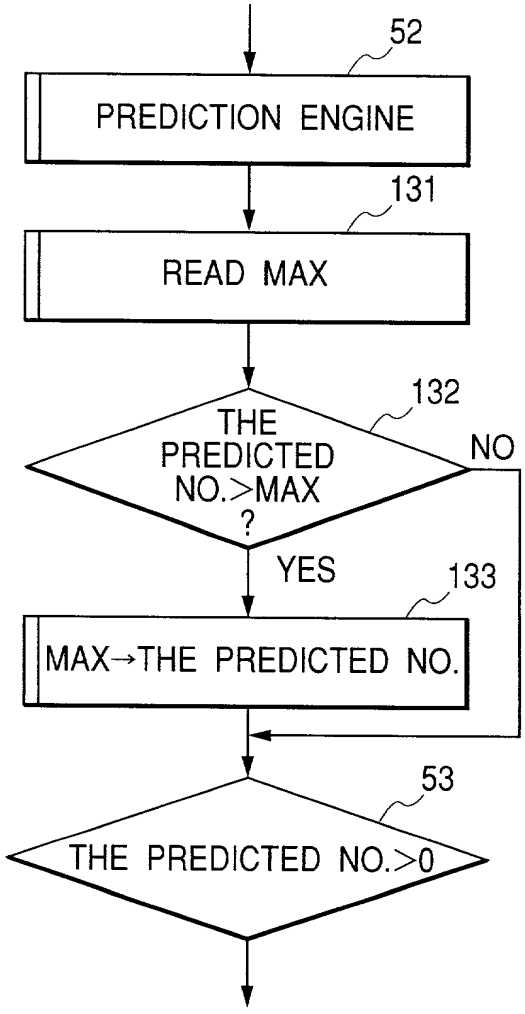
52
PREDICTION ENGINE
131
READ MAX
132
THE PREDICTED NO.>MAX ?
NO
YES
133
MAX→THE PREDICTED NO.
53
THE PREDICTED NO.>0

FIG. 14

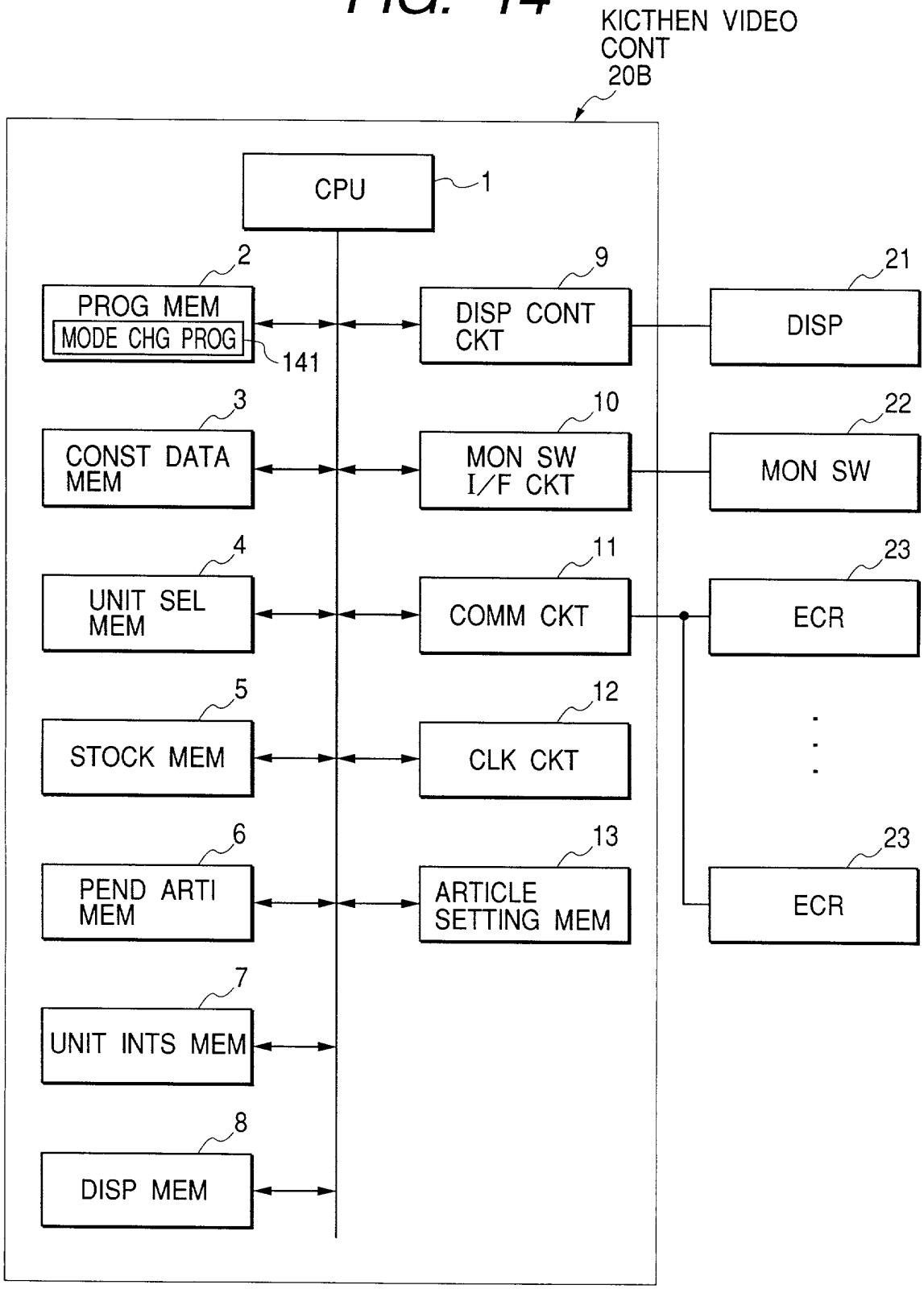
KICTHEN VIDEO CONT
20B
CPU
1
2
PROG MEM
MODE CHG PROG
141
3
CONST DATA MEM
4
UNIT SEL MEM
5
STOCK MEM
6
PEND ARTI MEM
7
UNIT INTS MEM
8
DISP MEM
9
DISP CONT CKT
10
MON SW I/F CKT
11
COMM CKT
12
CLK CKT
13
ARTICLE SETTING MEM
21
DISP
22
MON SW
23
ECR
23
ECR

FIG. 15

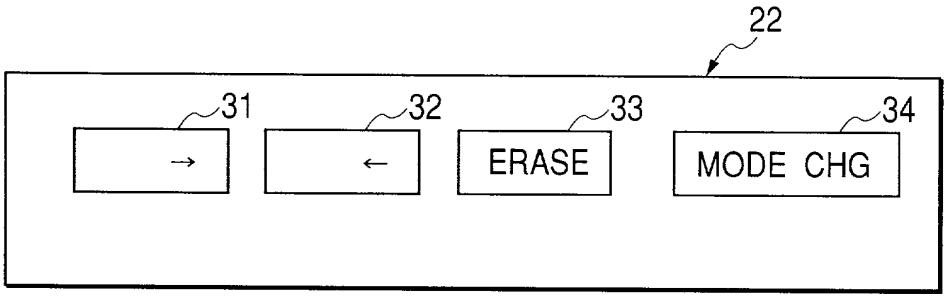
22
31
32
33
34
→
←
ERASE
MODE CHG

FIG. 16

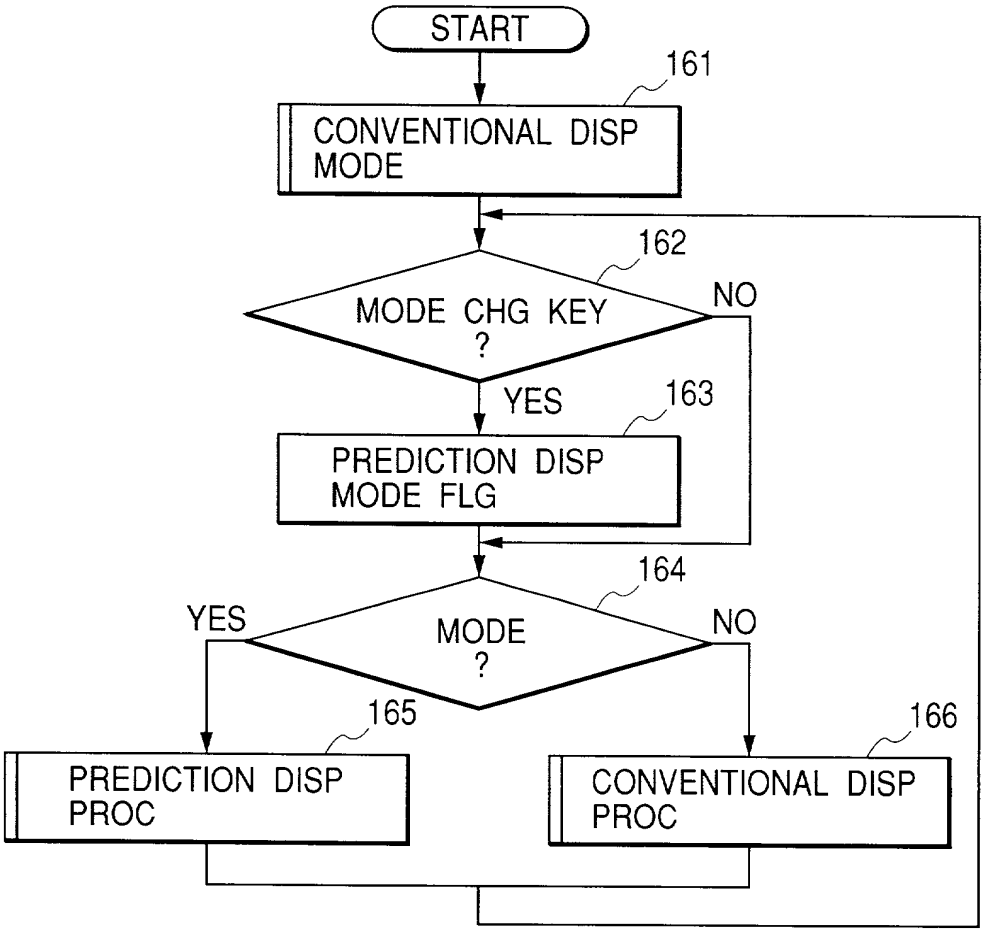
START
161
CONVENTIONAL DISP MODE
162
MODE CHG KEY ?
NO
YES
163
PREDICTION DISP MODE FLG
164
YES
MODE ?
NO
165
PREDICTION DISP PROC
166
CONVENTIONAL DISP PROC

FIG. 17

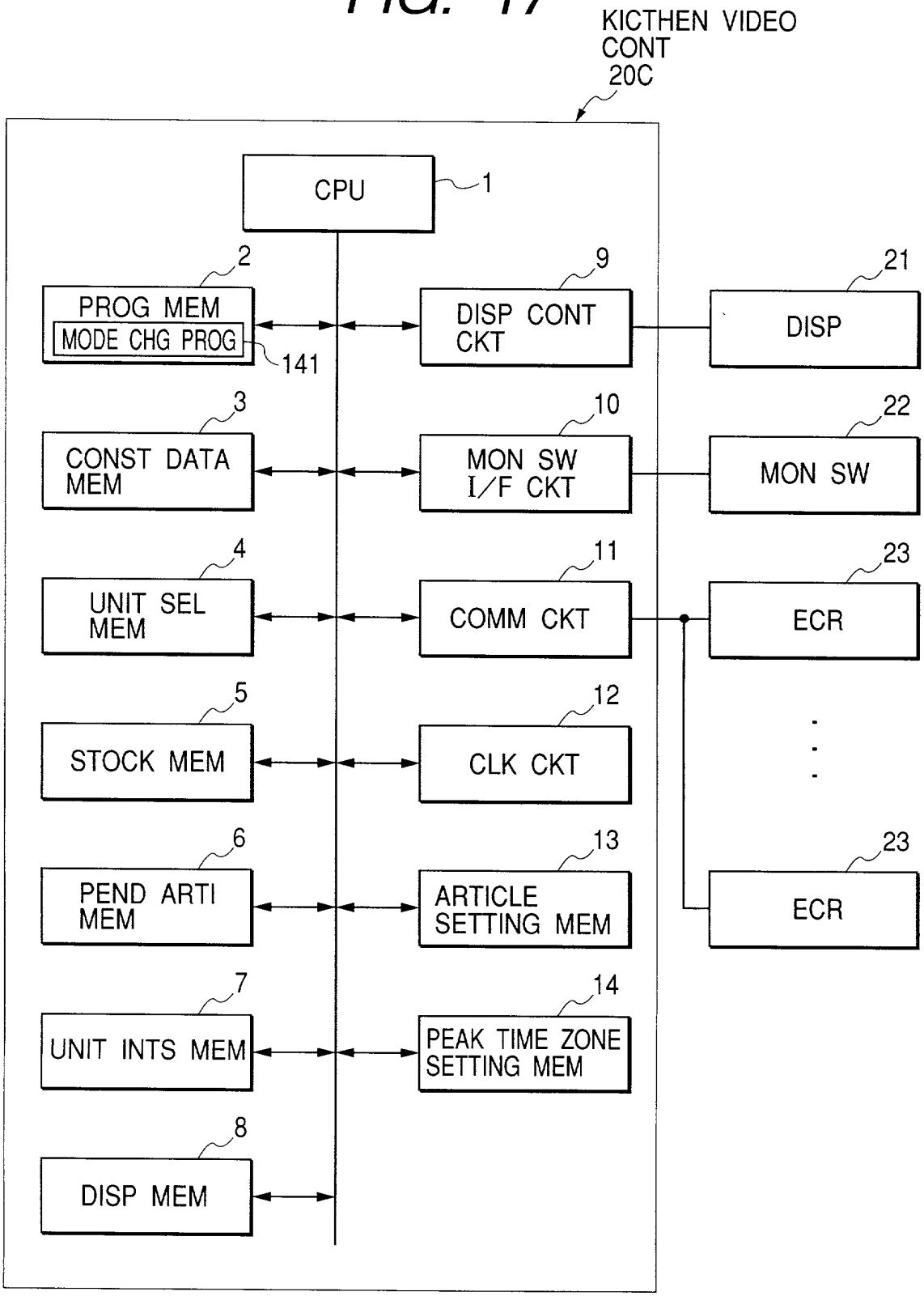
KICTHEN VIDEO CONT
20C
CPU
1
2
PROG MEM
MODE CHG PROG
141
3
CONST DATA MEM
4
UNIT SEL MEM
5
STOCK MEM
6
PEND ARTI MEM
7
UNIT INTS MEM
8
DISP MEM
9
DISP CONT CKT
10
MON SW I/F CKT
11
COMM CKT
12
CLK CKT
13
ARTICLE SETTING MEM
14
PEAK TIME ZONE SETTING MEM
21
DISP
22
MON SW
23
ECR
23
ECR

FIG. 18

START TIME OF PEAK TIME	11:00
END TIME OF PEAK TIME	14:00

181

182

FIG. 19

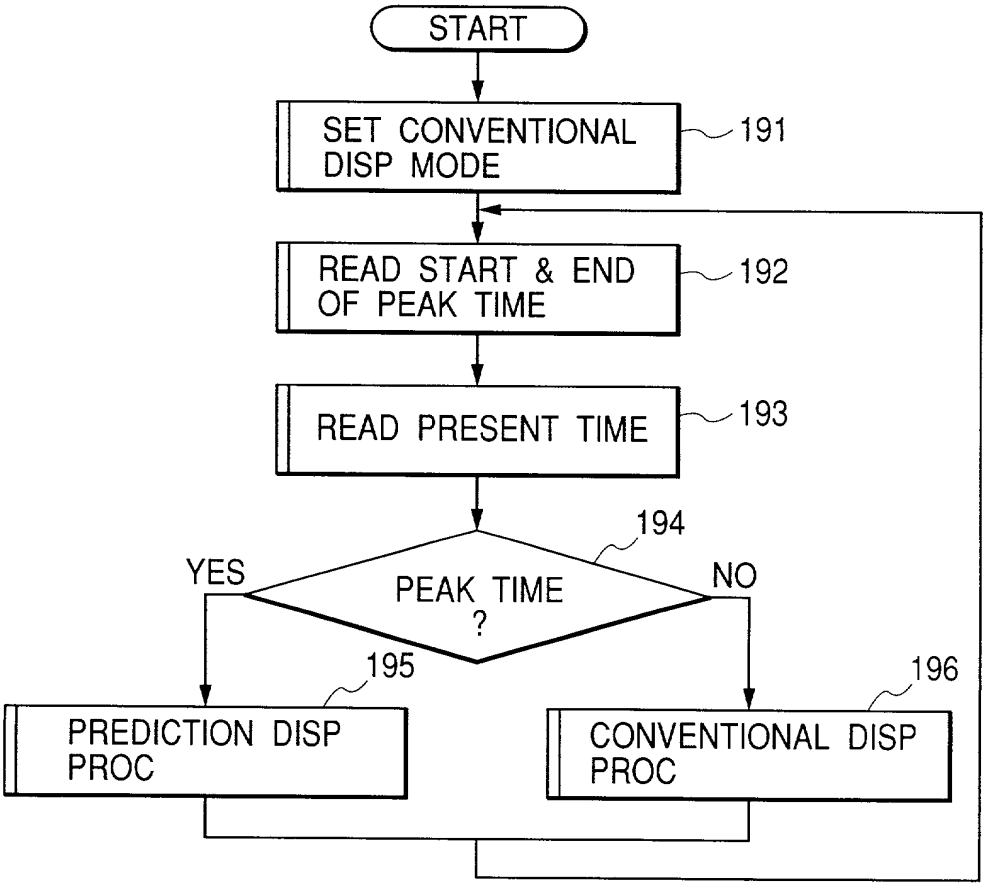

FIG. 20

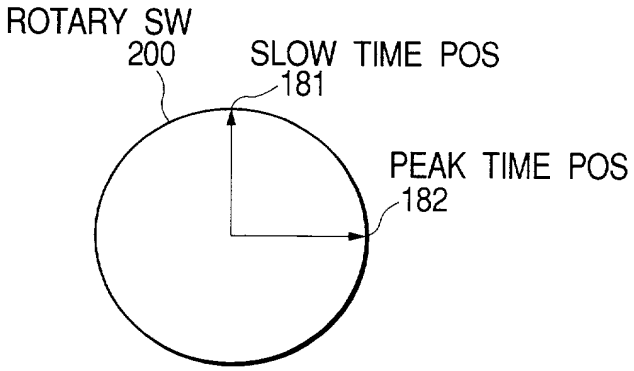

FIG. 21

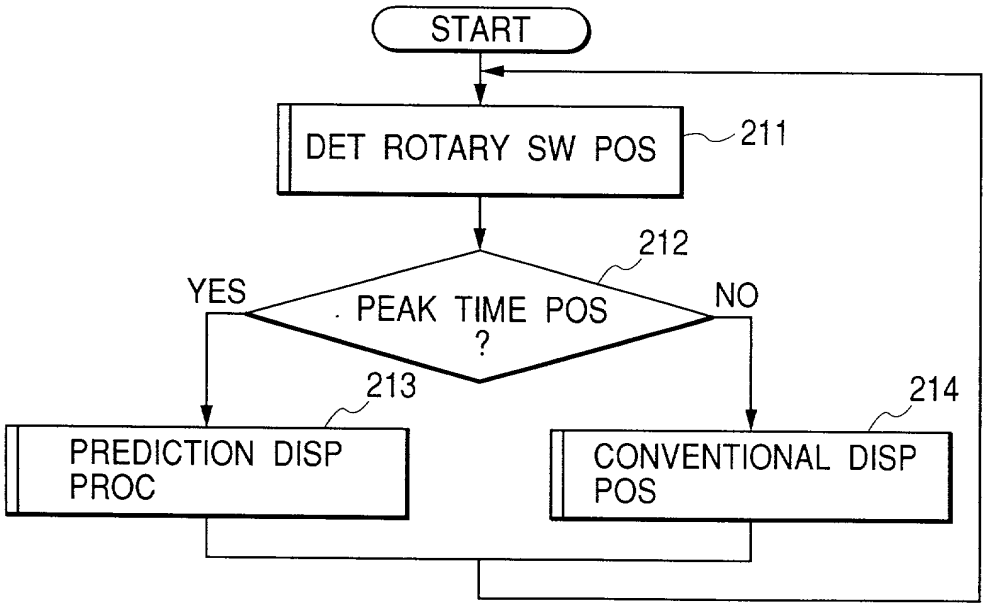

FIG. 22

WEEKDAY'S PEAK TIME ZONE	11:30～13:30
HOLIDAY'S PEAK TIME ZONE	11:00～14:30

221

222

FIG. 23

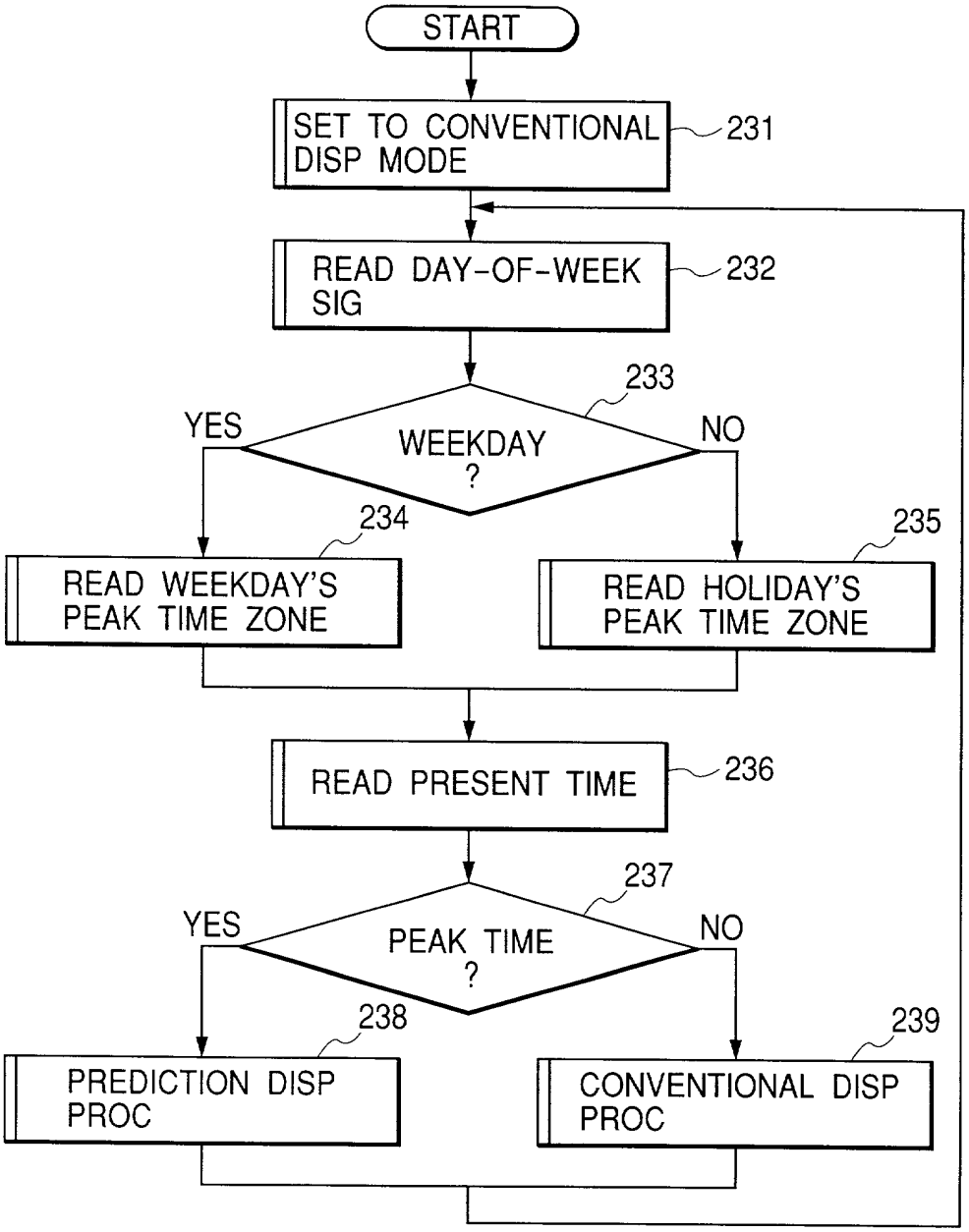
START
SET TO CONVENTIONAL DISP MODE
231
READ DAY-OF-WEEK SIG
232
233
WEEKDAY ?
YES
NO
234
READ WEEKDAY'S PEAK TIME ZONE
235
READ HOLIDAY'S PEAK TIME ZONE
READ PRESENT TIME
236
237
PEAK TIME ?
YES
NO
238
PREDICTION DISP PROC
239
CONVENTIONAL DISP PROC

FIG. 24A

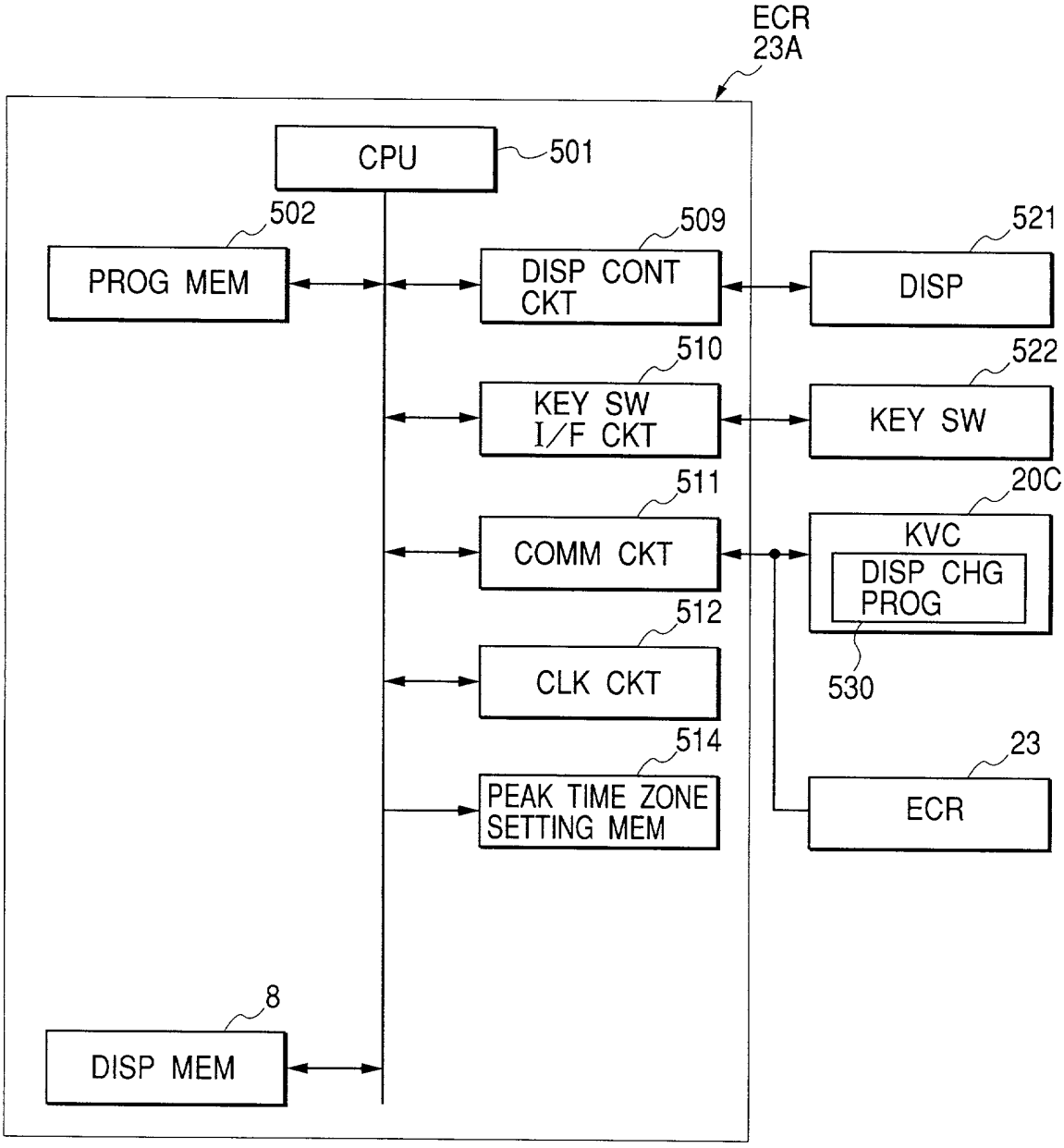
ECR
23A
CPU
501
502
PROG MEM
509
DISP CONT CKT
521
DISP
510
KEY SW I/F CKT
522
KEY SW
511
COMM CKT
20C
KVC
DISP CHG PROG
530
512
CLK CKT
514
PEAK TIME ZONE SETTING MEM
23
ECR
8
DISP MEM

FIG. 24B

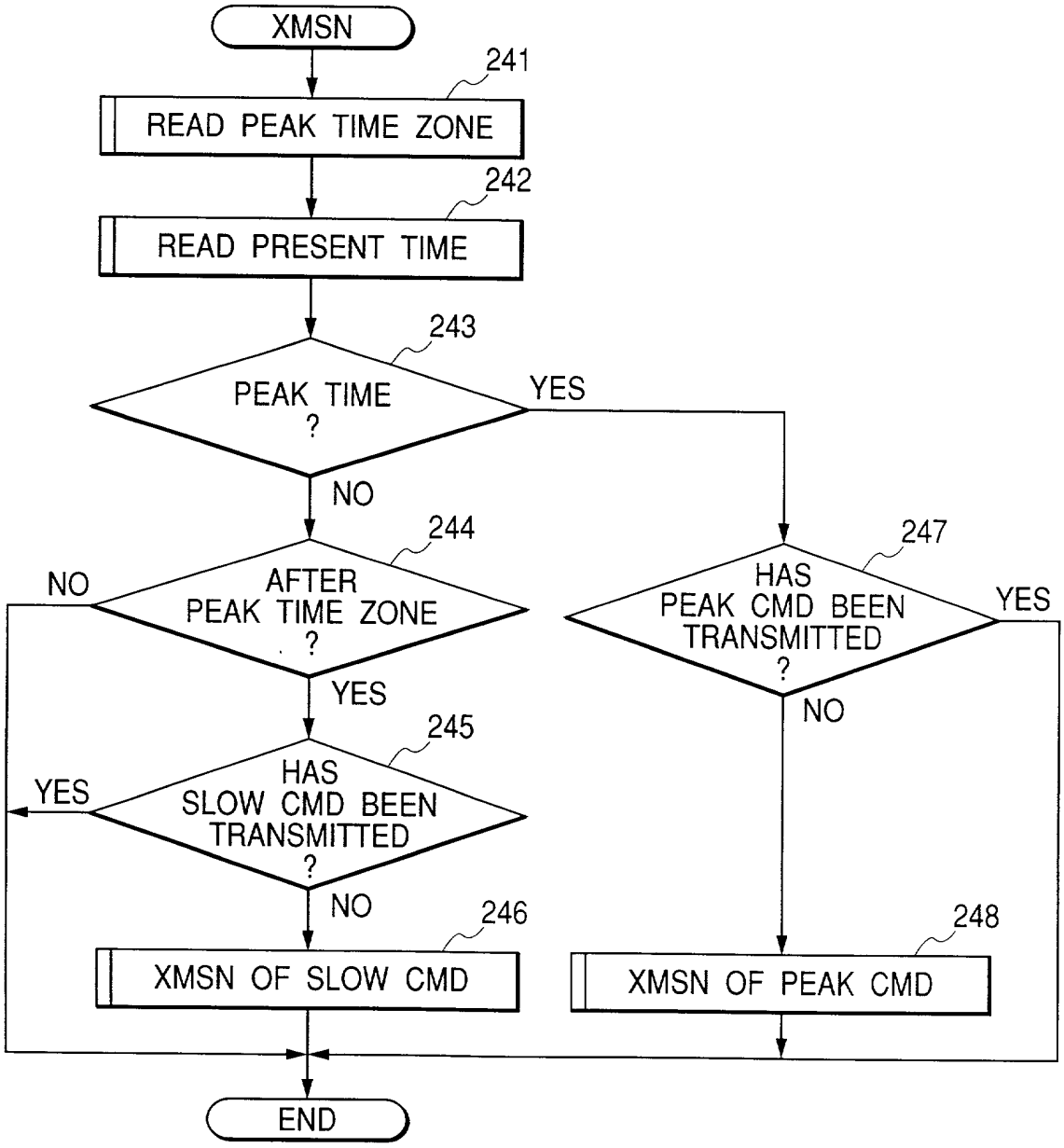
XMSN
241
READ PEAK TIME ZONE
242
READ PRESENT TIME
243
PEAK TIME ?
YES
NO
244
AFTER PEAK TIME ZONE ?
NO
YES
247
HAS PEAK CMD BEEN TRANSMITTED ?
YES
NO
245
HAS SLOW CMD BEEN TRANSMITTED ?
YES
NO
246
XMSN OF SLOW CMD
248
XMSN OF PEAK CMD
END

FIG. 25

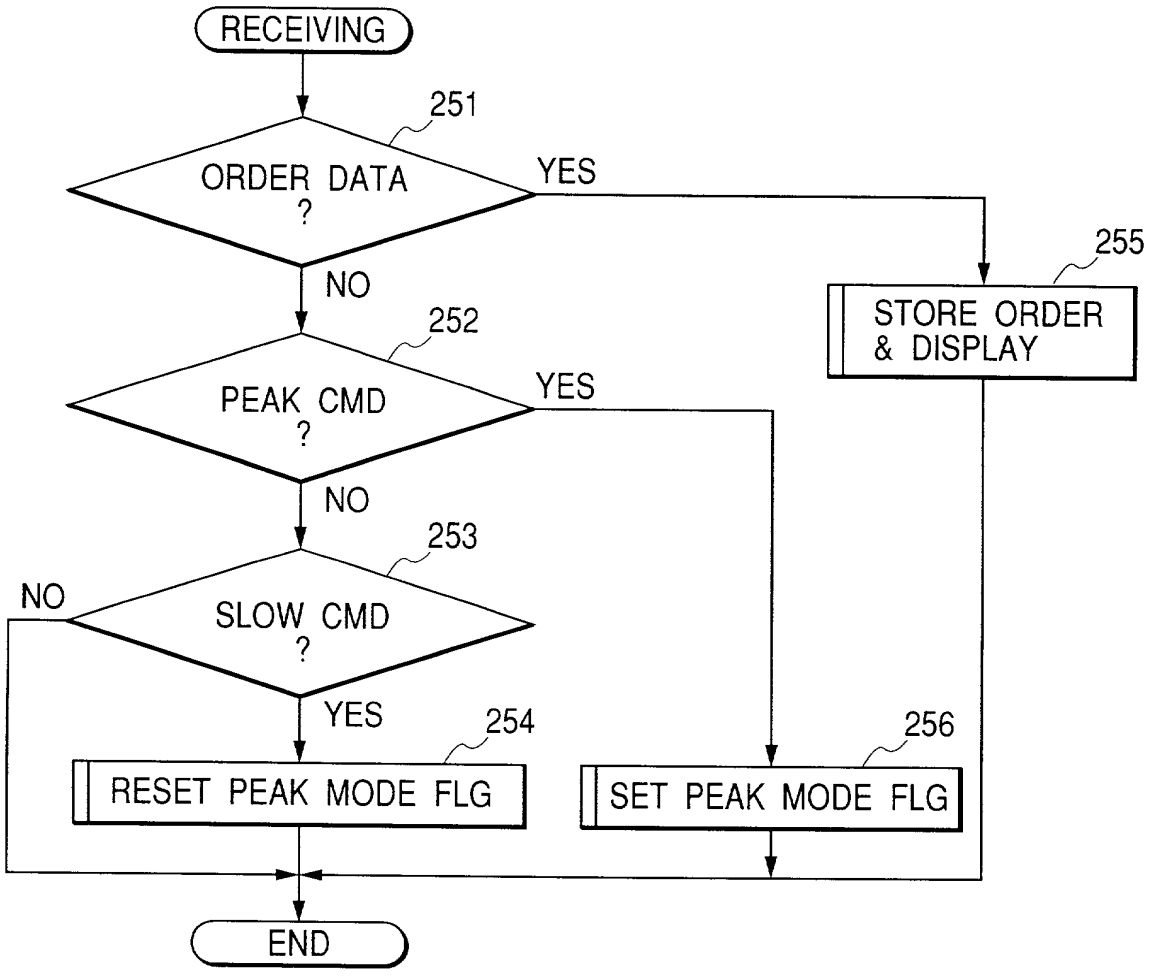
RECEIVING
251
ORDER DATA ?
YES
NO
255
STORE ORDER & DISPLAY
252
PEAK CMD ?
YES
NO
253
NO
SLOW CMD ?
YES
254
256
RESET PEAK MODE FLG
SET PEAK MODE FLG
END

FIG. 26

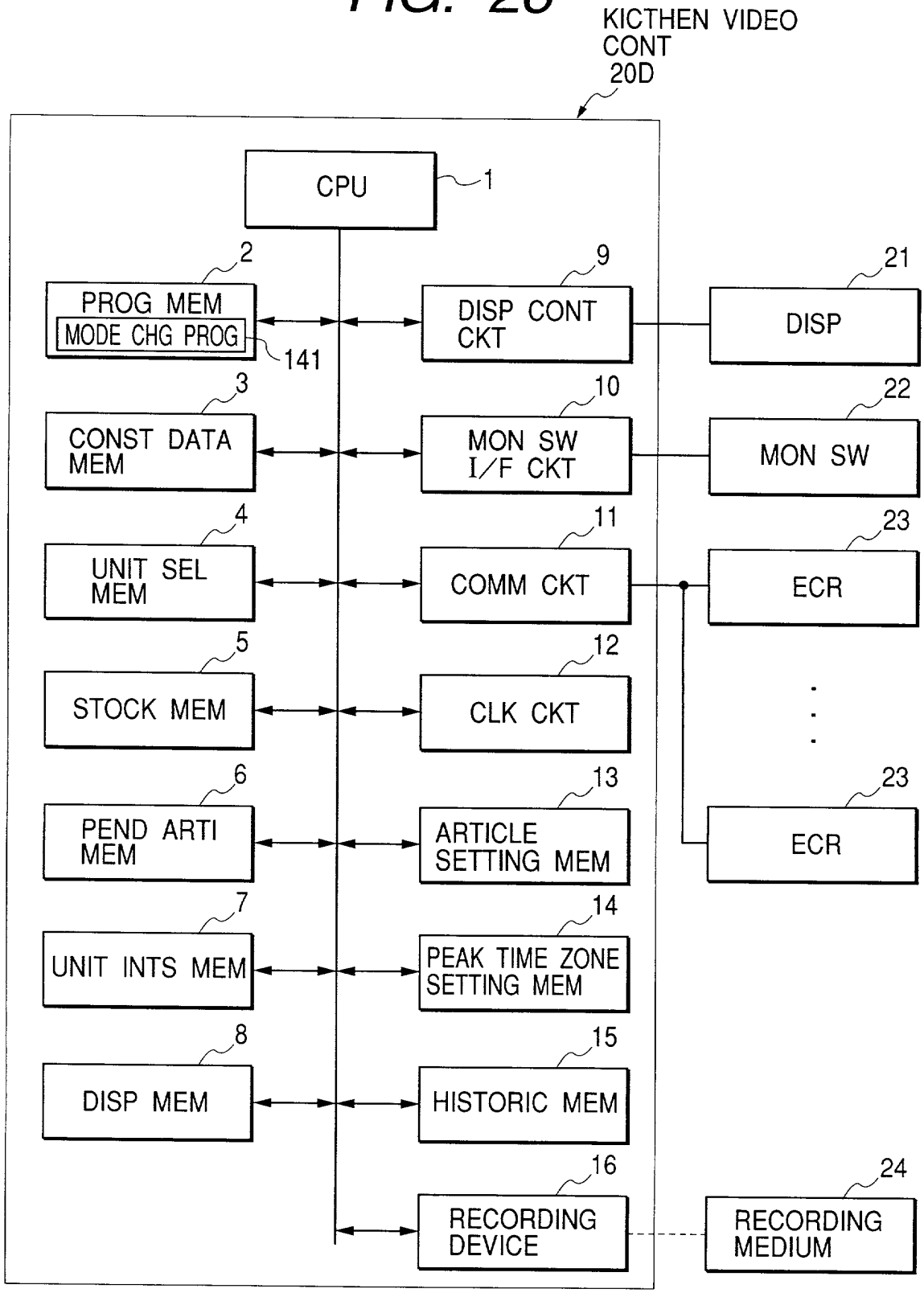
KICTHEN VIDEO CONT 20D
CPU
1
2
PROG MEM
MODE CHG PROG
141
3
CONST DATA MEM
4
UNIT SEL MEM
5
STOCK MEM
6
PEND ARTI MEM
7
UNIT INTS MEM
8
DISP MEM
9
DISP CONT CKT
10
MON SW I/F CKT
11
COMM CKT
12
CLK CKT
13
ARTICLE SETTING MEM
14
PEAK TIME ZONE SETTING MEM
15
HISTORIC MEM
16
RECORDING DEVICE
21
DISP
22
MON SW
23
ECR
23
ECR
24
RECORDING MEDIUM

FIG. 27

15

UNIT INT	THE NO. OF STOCKS	THE NO. OF PENDING ARTICLES	THE NO. OF SOLD ARTICLES	THE NO. OF PRODUCTIONS
8:01-8:05	0	0	2	3
8:06-8:10	1	0	4	5
8:11-8:15	2	1	3	4
8:16-8:20	1	0	5	4
8:21-8:25	0	0	5	5
:				
:				
21:21-21:25	1	0	1	1
21:26-21:30	0	1	15	0

FIG. 28

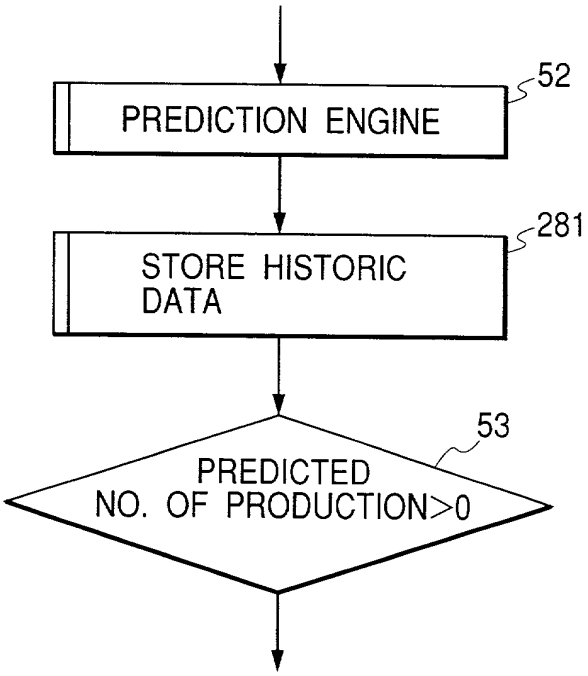

FIG. 29A

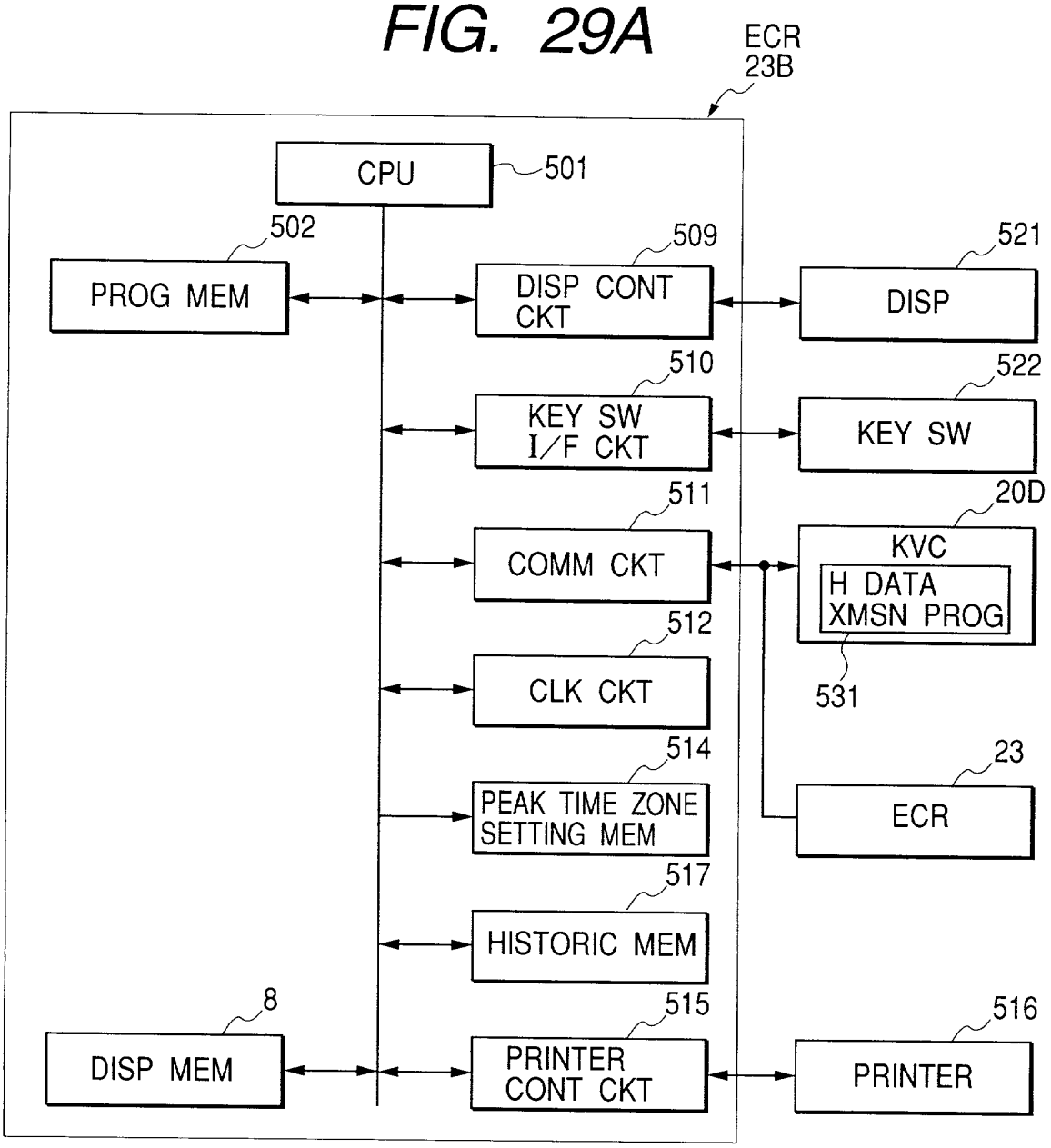

FIG. 29B

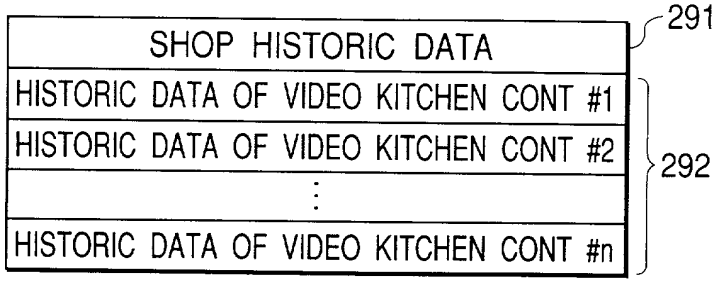

FIG. 30

REPORT OF HISTORIC DATA OF VIDEO KITCHEN CONT #1

UNIT INT	THE NO. OF STOCKS	THE NO. OF PENDING ARTICLES	THE NO. OF SOLD ARTICLES	THE NO. OF ORDERED PRODUCTS	ERROR
8:01-8:05	0	0	2	3	1
8:06-8:10	1	0	4	5	1
8:11-8:15	2	1	3	4	1
8:16-8:20	1	0	5	4	−1
8:21-8:25	0	0	5	5	0
⋮					

FIG. 31

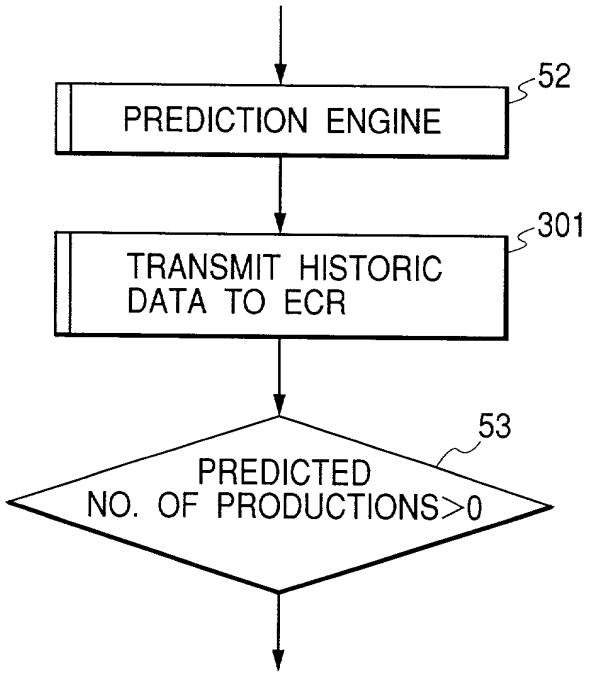

FIG. 32

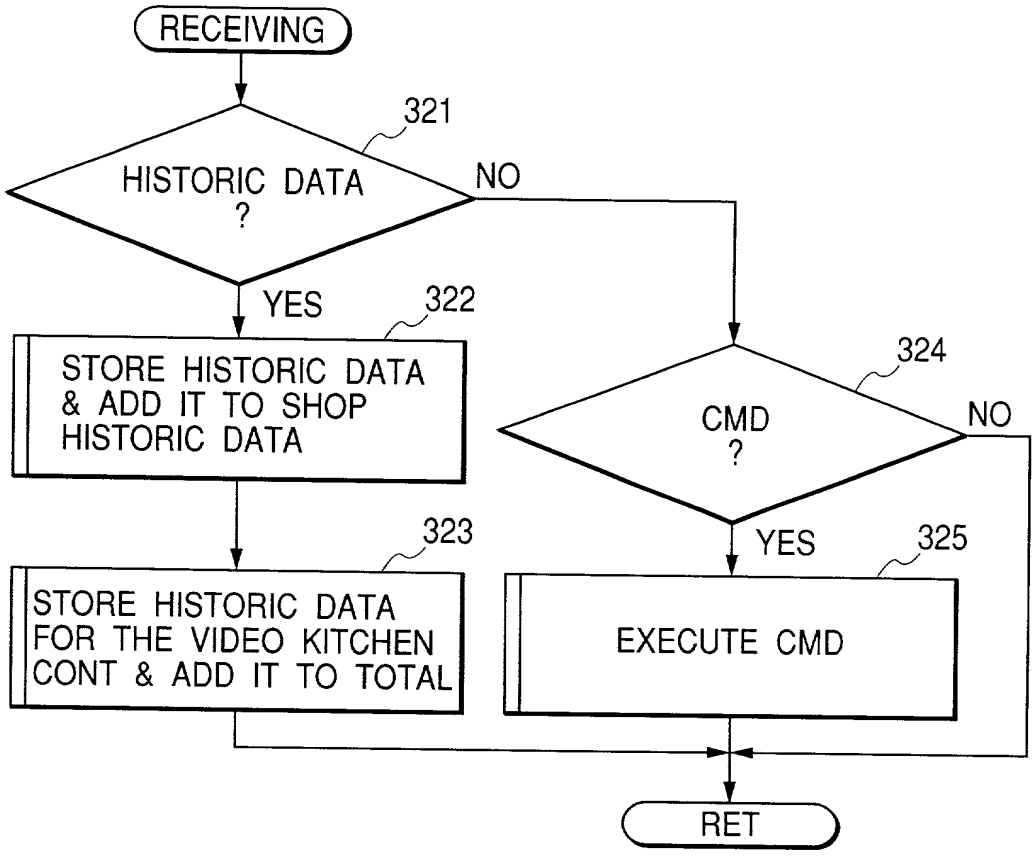
RECEIVING
321
HISTORIC DATA ?
NO
YES
322
STORE HISTORIC DATA & ADD IT TO SHOP HISTORIC DATA
324
CMD ?
NO
YES
325
323
STORE HISTORIC DATA FOR THE VIDEO KITCHEN CONT & ADD IT TO TOTAL
EXECUTE CMD
RET

FIG. 33

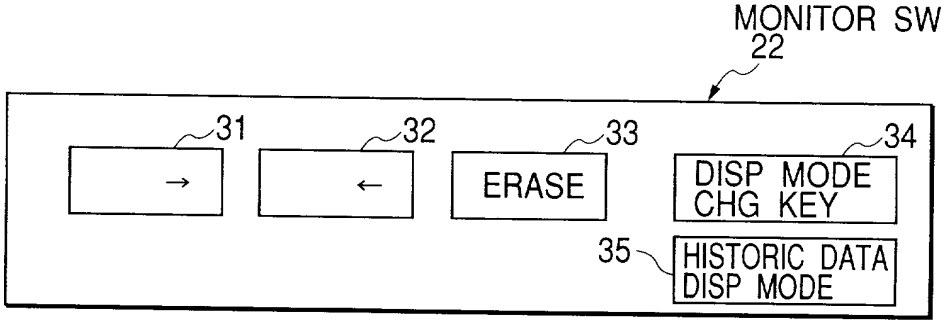
MONITOR SW
22
31
32
33
34
→
←
ERASE
DISP MODE CHG KEY
35
HISTORIC DATA DISP MODE

FIG. 34

DISP
21

UNIT INT	THE NO. OF STOCKS	THE NO. OF PENDING ARTICLES	THE NO. OF SOLD ARTICLES	THE NO. OF PRODUCTIONS
8:01-8:05	0	0	2	3
8:06-8:10	1	0	4	5
8:11-8:15	2	1	3	4
8:16-8:20	1	0	5	4
8:21-8:25	0	0	5	5
⋮	⋮	⋮	⋮	⋮

FIG. 35

ARTICLE SETTING MEMORY
13

351

ARTICLE NAME	GROUP CODE
HAMBURGER	1
BIGBURGER	1
CHEESEBURGER	1
FRY	4
S POTATO	3
M POTATO	3
L POTATO	3
S NUGGET	2
M NUGGET	2
L NUGGET	2
S COLA	5
M COLA	5
L COLA	5

FIG. 36

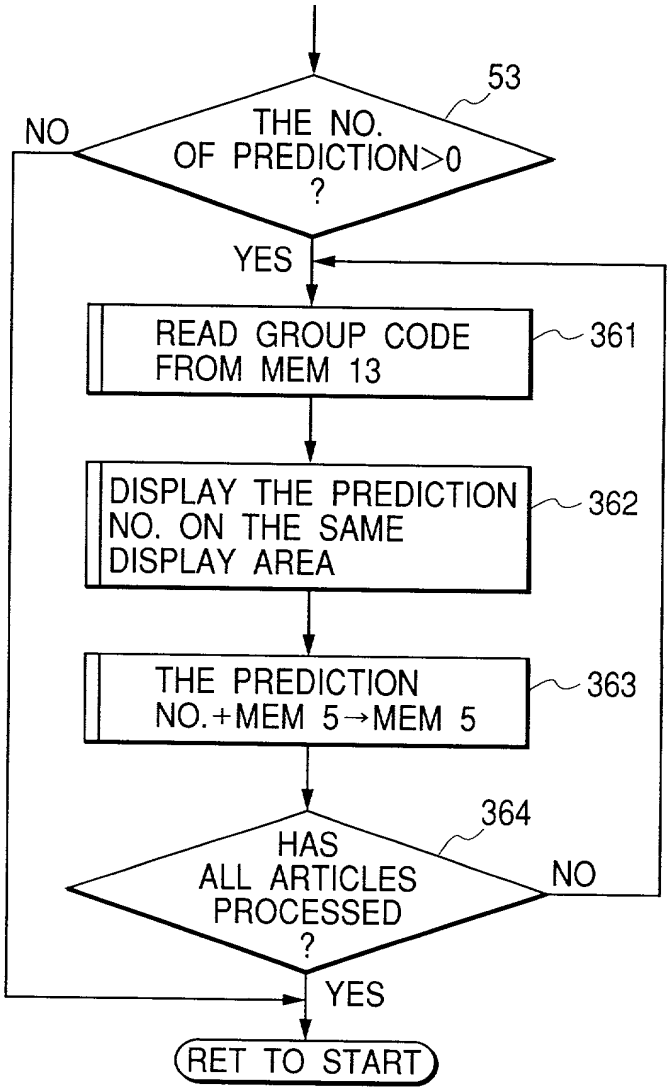
53
THE NO. OF PREDICTION>0 ?
NO
YES
READ GROUP CODE FROM MEM 13
361
DISPLAY THE PREDICTION NO. ON THE SAME DISPLAY AREA
362
THE PREDICTION NO.+MEM 5→MEM 5
363
364
HAS ALL ARTICLES PROCESSED ?
NO
YES
RET TO START

FIG. 37

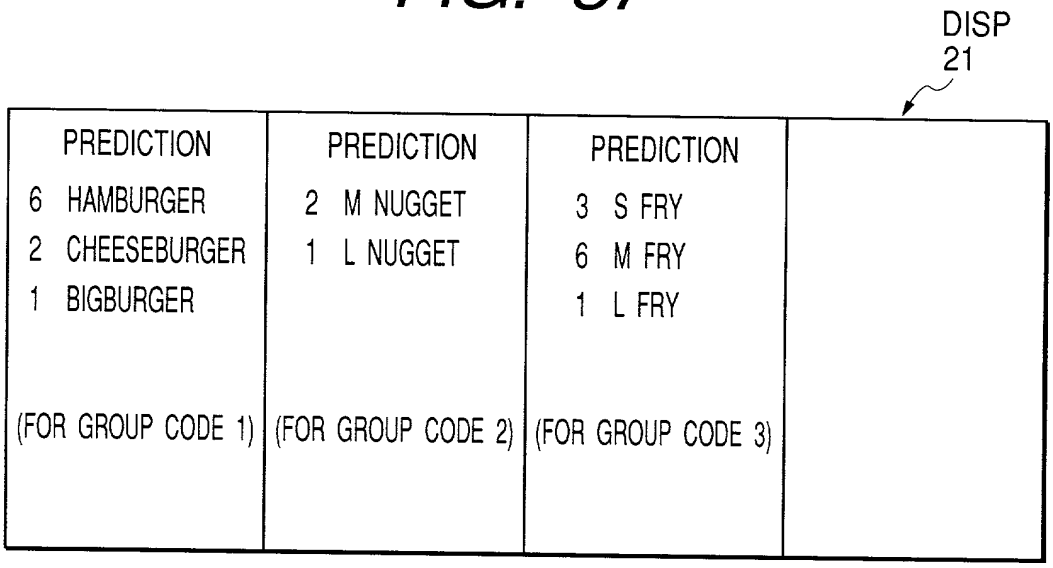

FIG. 38

ARTICLE SETTING MEMORY
13

ARTICLE NAME	TIME LIMIT (MIN)
HAMBURGER	10
BIGBURGER	10
CHEESEBURGER	10
FRY	10
S POTATO	5
M POTATO	5
L POTATO	5
S NUGGET	10
M NUGGET	10
L NUGGET	10
S COLA	0
M COLA	0
L COLA	0

FIG. 39

STOCK MEMORY
5

ARTICLE NAME	THE NO. OF STOCKS	PASSED TIME (MIN)
HAMBURGER	5	7
BIGBURGER	3	2
CHEESEBURGER	0	0
FRY	0	0
S POTATO	1	0
M POTATO	4	3
L POTATO	1	2
S NUGGET	0	0
M NUGGET	3	0
L NUGGET	0	0
S COLA	0	0
M COLA	0	0
L COLA	0	0

FIG. 40

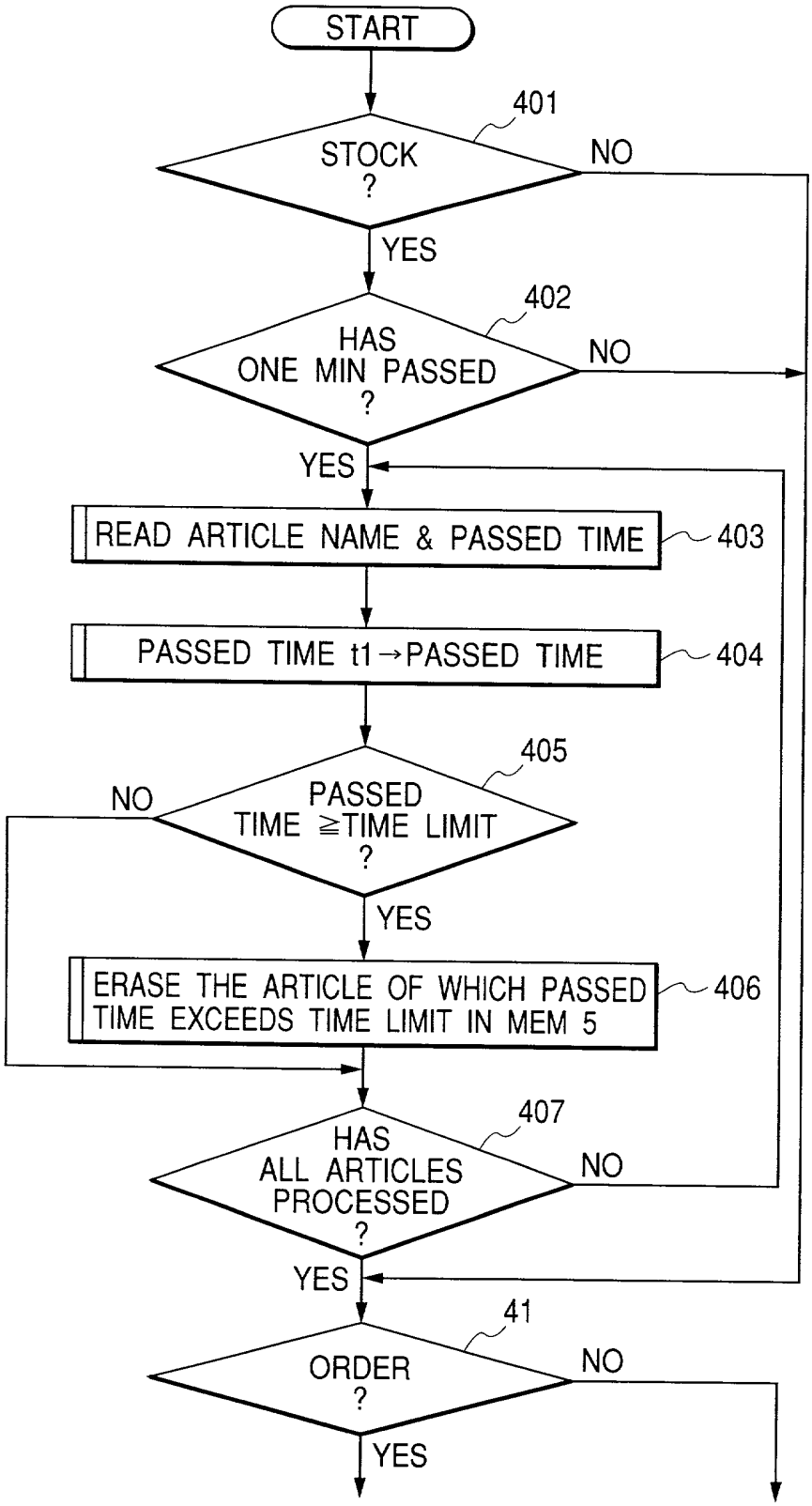
START
401
STOCK ?
NO
YES
402
HAS ONE MIN PASSED ?
NO
YES
READ ARTICLE NAME & PASSED TIME
403
PASSED TIME t1→PASSED TIME
404
405
NO
PASSED TIME ≧TIME LIMIT ?
YES
ERASE THE ARTICLE OF WHICH PASSED TIME EXCEEDS TIME LIMIT IN MEM 5
406
407
HAS ALL ARTICLES PROCESSED ?
NO
YES
41
ORDER ?
NO
YES

FIG. 41
PRIOR ART

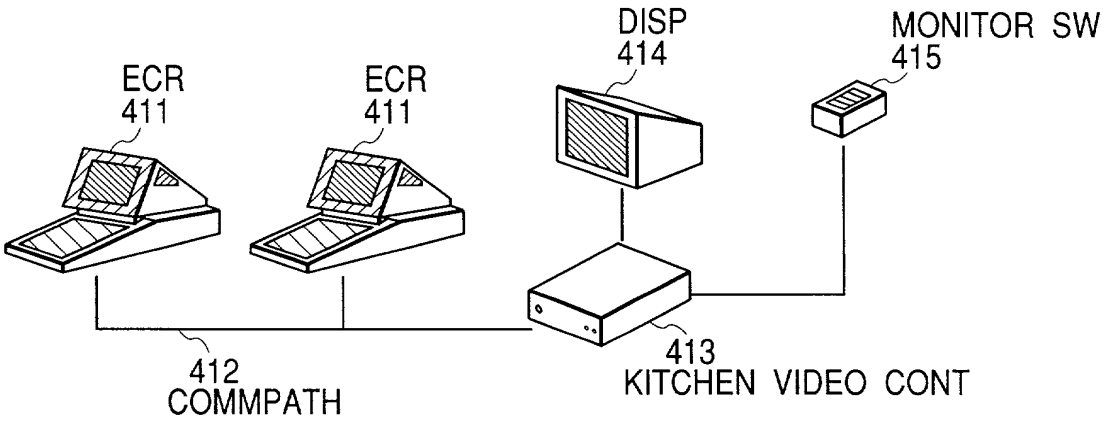

FIG. 42
PRIOR ART

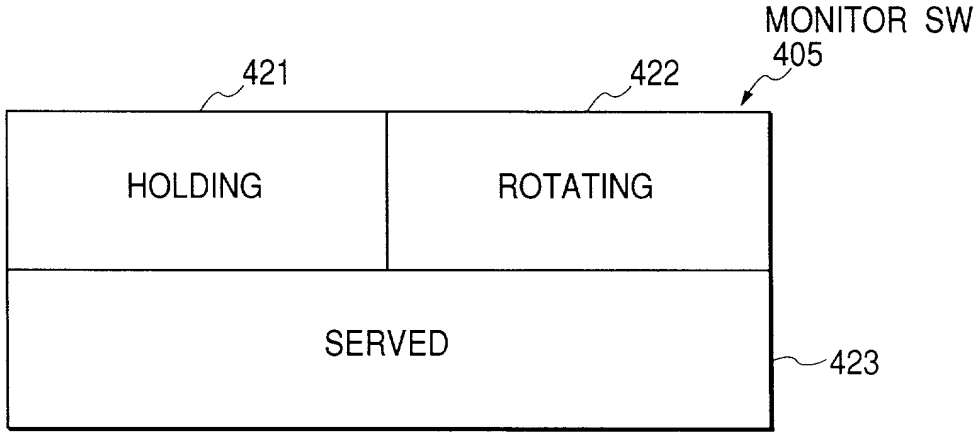

FIG. 43
PRIOR ART

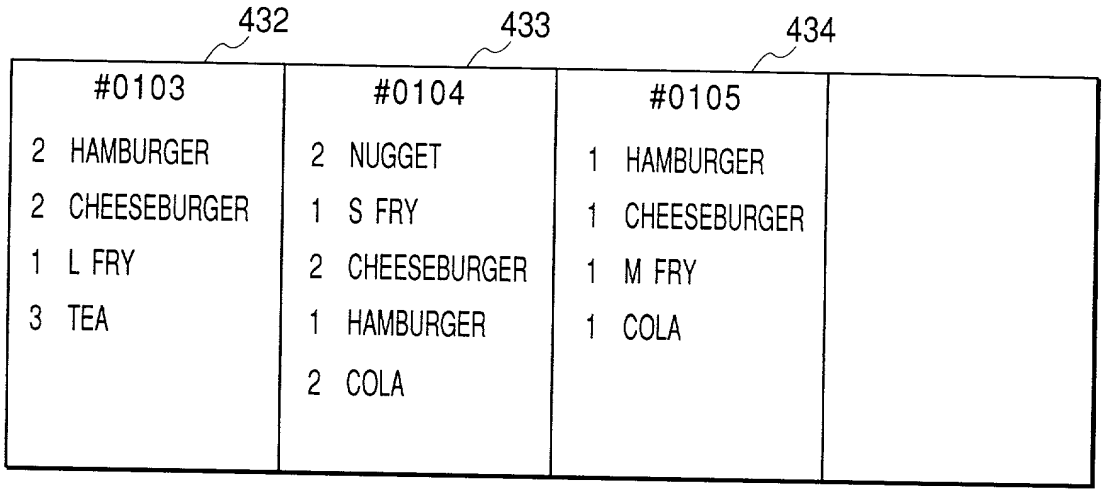
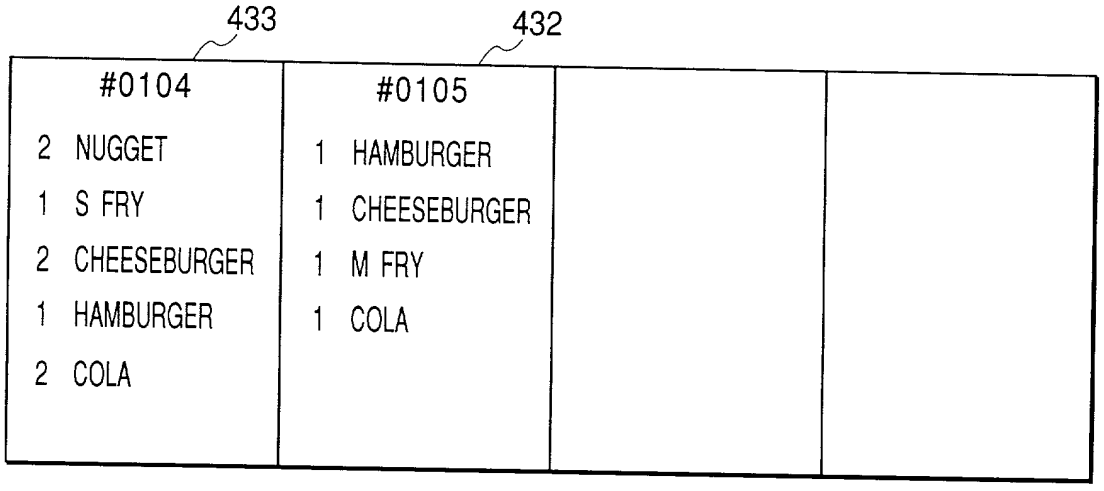
FIG. 44
PRIOR ART